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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 10/500,104   | 06/25/2004  | Tsuyoshi Nishimoto   | 62533.00015            | 2743             |
| 32294 7590 04/10/2007<br>SQUIRE, SANDERS & DEMPSEY L.L.P.<br>14TH FLOOR<br>8000 TOWERS CRESCENT<br>TYSONS CORNER, VA 22182 |             |                      | EXAMINER<br>SPAHN, GAY |                  |
|  |             |                      | ART UNIT<br>3635       | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | MAIL DATE            | DELIVERY MODE          |                  |
| 31 DAYS  |             | 04/10/2007           | PAPER                  |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/500,104

Applicant(s)

NISHIMOTO ET AL.

Examiner

Gay Ann Spahn

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-32 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Election/Restriction - ELECTION OF SPECIES REQUIREMENT***

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

SPECIES I - Fig. 1;  
SPECIES II - Fig. 14;  
SPECIES III - Fig. 20;  
SPECIES IV - Fig. 22(a);  
SPECIES V - Fig. 22(b);  
SPECIES VI - Fig. 23;  
SPECIES VII - Fig. 31;  
SPECIES VIII - Fig. 32;  
SPECIES IX - Fig. 38;  
SPECIES X - Fig. 39;  
SPECIES XI - Fig. 41;  
SPECIES XII - Fig. 51;  
SPECIES XIII - Fig. 52(a);  
SPECIES XIV - Fig. 57;  
SPECIES XV - Fig. 69;

SPECIES XVI - Fig. 73;  
SPECIES XVII - Fig. 75;  
SPECIES XVIII - Fig. 77;  
SPECIES XIX - Fig. 78(a) and 78(b);  
SPECIES XX - Fig. 79(b);  
SPECIES XXI - Fig. 80(a);  
SPECIES XXII - Fig. 80(b);  
SPECIES XXIII - Fig. 80(c);  
SPECIES XXIV - Fig. 81(a) and 81(b);  
SPECIES XXV - Fig. 83(a);  
SPECIES XXVI - Fig. 83(b);  
SPECIES XXVII - Fig. 83(c);  
SPECIES XXVIII - Fig. 84;  
OR  
SPECIES XXIX - Fig. 87.

If Applicants elect SPECIES VI (Fig. 23), then Applicants must also elect between: (1) a SUBSPECIES of treads; and (2) a SUBSPECIES of upper chords; and (3) a SUBSPECIES of lower chords:

- (1) SPECIES VI, tread SUBSPECIES I - Fig. 27; OR  
SPECIES VI, tread SUBSPECIES II - Fig. 28;  
AND

- (2) SPECIES VI, upper chord SUBSPECIES I - Fig. 25(b); OR  
SPECIES VI, upper chord SUBSPECIES II - Fig. 29(a);  
AND
- (3) SPECIES VI, lower chord SUBSPECIES I - Fig. 26(a); OR  
SPECIES VI, lower chord SUBSPECIES II - Fig. 29(b).

If Applicants elect SPECIES VIII (Fig. 32), then Applicants must also elect between the SUBSPECIES of upper and lower reinforcement members as follows:

- SPECIES VIII, upper/lower reinforcement members SUBSPECIES I - Fig. 34(a);  
OR  
SPECIES VIII, upper/lower reinforcement members SUBSPECIES II - Fig. 27(a).

If Applicants elect SPECIES X (Fig. 39), then Applicants must also elect between the SUBSPECIES of board members as follows:

- SPECIES X, board member SUBSPECIES I - Fig. 39;  
OR  
SPECIES VIII, board member SUBSPECIES II - Fig. 40.

If Applicants elect SPECIES XI (i.e., Fig. 41), then Applicants must also elect between the SUBSPECIES of tread receiving members as follows:

- (1) SPECIES XI, tread receiving member SUBSPECIES I - Fig. 47(a);  
SPECIES XI, tread receiving member SUBSPECIES II - Fig. 53(a);

OR

SPECIES XI, tread receiving member SUBSPECIES III- Fig. 54(a)/Fig. 55(a).

Further, if Applicants elect SPECIES XI (i.e., FIG. 41), SUBSPECIES III (i.e., Fig. 54(a)/Fig. 55(a)), then Applicants must also elect a SUBSPECIES of tread as follows:

(2) SPECIES XI, tread SUBSPECIES I - Fig. 54(a) (i.e., solid);

OR

SPECIES XI, tread SUBSPECIES II - Fig. 55(a) (i.e., hollow).

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

The examiner enlists Applicants help in establishing which claims correspond to which species since there are twenty-nine (29) species.

The following claim(s) are generic: independent claims 1 and 21 appear to be generic.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

SPECIES I (i.e., Fig. 1) has the special technical feature of rectangular shaped treads having short dimension ends that end at the truss structural members.

SPECIES II (i.e., Fig. 14) has the special technical feature of having oblong shaped treads with curved short dimension ends which extend past the truss structural members.

SPECIES III (i.e., Fig. 20) has the special technical feature of being a curved staircase having oblong shaped treads with curved short dimension ends which extend past the truss structural members.

SPECIES IV (i.e., Fig. 22(a)) has the special technical feature of being an increasing width staircase from top to bottom that has oblong shaped treads with curved short dimension ends which extend past the truss structural members.

SPECIES V (i.e., Fig. 22(b)) has the special technical feature of being an decreasing width staircase from top to center and an increasing width staircase from center bottom that has oblong shaped treads with curved short dimension ends which extend past the truss structural members.

SPECIES VI (i.e., Fig. 23) has the special technical feature of having upper and lower chord members composing the truss structural members which are stringers long enough to cover the whole length of the truss structural members and the upper and

lower chord members are each composed of members having a groove part so that the hubs are installed inside the groove parts.

SPECIES VII (i.e., Fig. 31) has the special technical feature of having upper and lower chord members each composed of hollow members so that the hubs are installed on the bottom faces of the upper chord members and on the top faces of the lower chord members.

SPECIES VIII (i.e., Fig. 32) has the special technical feature of having truss structural members which are composed of a pair of right and left stringers, a plurality of linking members for linking the stringers, treads which are fixedly supported on the linking members, handrails located above the side end parts of the treads, balusters for supporting the handrails, and support shoes disposed between the top ends of the truss structural members and the beam member upper floor and the bottom ends of the truss structural members and the floor face lower floor.

SPECIES IX (i.e., Fig. 38) has the special technical feature of having an intermediate reinforcing member fixedly provided on the bottom faces of the plurality of linking members for linking the truss structural members which are a pair of right and left stringers (more particularly, the plurality of linking members adjacent in the height direction are integrated by being linked to each other via the intermediate reinforcing member).

SPECIES X (i.e., Fig. 39) has the special technical feature of having a board member between a pair of right and left truss structural members.

SPECIES XI (i.e., Fig. 41) has the special technical feature of having a pair of right and left truss structural members inclining with the slope of the staircase, and a plurality of treads disposed between the truss structural members, wherein a riser is attached between the treads adjacent to each other, and wherein handrails are omitted.

SPECIES XII (i.e., Fig. 51) has the special technical feature of having the upper chord members comprise a plurality of short-length upper frame members provided in series in the direction of the staircase.

SPECIES XIII (i.e., Fig. 52(a)) has the special technical feature of having the upper chord members comprise a plurality of upper hubs provided in series in the direction of the staircase inclination and a long-length upper through member fixed to the upper hubs, and the lower chord members comprise a plurality of lower hubs provided in series in the direction of the staircase inclination and a long-length lower through member fixed to the lower hubs.

SPECIES XIV (i.e., Fig. 57) has the special technical feature of having a space truss structural member as an intermediate stringer, the space truss structural member inclined with the slope of the staircase, and also having a plurality of brackets disposed at each riser height, and treads supported by the space truss structural member via the brackets.

SPECIES XV (i.e., Fig. 69) has the special technical feature of having the space truss structural member composed of two parallel upper chord members, linking frame members and linking diagonal members for linking the upper chord members with each other, a single lower chord member located below the midpoint of the upper chord

members, and lattice members for linking the upper chord members and the lower chord member together, wherein the upper cord members are each composed of a plurality of frame members linked via hubs which are node members, whereas the lower chord member is composed of a plurality of frame members linked via hubs.

SPECIES XVI (i.e., Fig. 73) has the special technical feature of having a space truss structural member inclining with the slope of the staircase, a plurality of brackets disposed at each of the heights of the risers, and treads supported by the space truss structural member via the brackets, wherein the space truss structural member is fixed to the floor face of the lower floor via support shoes attached to the lower ends of the truss structural member, and are fixed to beam members supporting the floor face of the upper floor via support shoes attached to the upper end of the truss structural member, and wherein the side ends of the treads are fixed to the wall face, and the other side ends are attached with a handrail 209.

SPECIES XVII (i.e., Fig. 75) has the special technical feature of having a space truss structural member comprising three upper chord members parallel to each other and two lower chord members, wherein one of the lower chord members is at the midpoint of the upper floor face and the lower floor face.

SPECIES XVIII (i.e., Fig. 77) has the special technical feature of having a plate member on the top face of the space truss structural member and fixing this plate member to a plurality of hubs such that the upper chord members adjacent to each other are linked to each other by the plate member.

SPECIES XIX (i.e., Fig. 78(a) and 78(b)) has the special technical feature of being constructed so that upper reinforcing members 261A are arranged along the upper chord members 210A of the space truss structural member 210 of the staircase of the tenth embodiment described above and are fixed to serial three or more hubs 202A forming the upper chord member 210A, and lower reinforcing members 261B are arranged along the lower chord members 210B and are fixed to serial three or more hubs 202B forming the lower chord member 210B (namely, along the upper chord members 210A and the lower chord members 210B, upper reinforcing members 261A and lower reinforcing members 261B are arranged so as to reinforce the strength in the weak axis direction of the linked parts of the hubs).

SPECIES XX (i.e., Fig. 79(b)) has the special technical feature of having the lower reinforcing member 261B disposed so that the lower reinforcing member 261B comes into contact with the bottom faces of the hubs 202B and prevents the frame members 201 and the lattice members 204 from slipping downward, so that the washer 202d can be omitted.

SPECIES XXI (i.e., Fig. 80(a)) has the special technical feature of having L-shaped upper reinforcing members 262 and the lower reinforcing member is formed of a member 263 having a groove-shaped section with a top face opened.

SPECIES XXII (i.e., Fig. 80(b)) has the special technical feature of having a hollow rectangular shaped upper reinforcing member 261A such that when the member 264 having a hollow part 264a is used as the upper reinforcing member 261A, the

sectional properties of the member 264 are high, so that rigidity can be improved not only in the side-to-side direction but also in the vertical direction.

SPECIES XXIII (i.e., Fig. 80(c)) has the special technical feature of having a member partially having a hollow part 265a may be disposed so that the hollow part 265a is positioned by the side of the upper chord member 210A (or the lower chord member 210B) and since the member 265 shown in FIG. 80(c) has a hollow part 265a at the side, not only is the rigidity of the upper chord member 210A improved in the side-to-side direction and the vertical direction, but also the upper chord member 210A is covered by the hollow part 265a, so that a simplified design is obtained for the side face of the staircase.

SPECIES XXIV (i.e., Fig. 81(a) and 81(b)) has the special technical feature of having a space truss structural member 270 inclining with the slope of the staircase, a plurality of brackets 206 disposed at each riser height, and treads 207 supported by the space truss structural member 270 via the brackets 206, wherein the space truss structural member 270 comprises two upper chord members 270A and 270A parallel to each other, frame-shaped linking frame members 203 that link the upper chord members 270A and 270A to each other, one lower chord member 270B positioned below the midpoint of the upper chord members 270A and 270A, lattice members 204 that link the upper chord members 270A and 270A and the lower chord member 270B to each other, and wherein the upper chord member 270A is formed of a member 71 having a groove part 271a that opens at its side face of the lower chord member 270B side and the hubs 202A are housed inside the groove part 271a.

SPECIES XXV (i.e., Fig. 83(a)) has the special technical feature of having the member 271 formed of an upper plate 271c and a lower plate 271d, a side plate 271e linking the side ends of these upper and lower plates, and a partition plate 271f that links the midpoint of the upper plate 271c to the midpoint of the lower plate 271d, wherein the groove part 271a is formed by the upper plate 271c, the lower plate 271d, and the partition plate 271f, and the hollow part 271b is formed by the upper plate 271c, the lower plate 271d, the side plate 271e, and the partition plate 271f, and wherein the member 271 is very light in weight since the inside is hollow, and the upper plate 271c and the lower plate 271d are linked by the partition plate 271f at their midpoints, so that the sectional structure of the member is strong against vertical loads.

SPECIES XXVI (i.e., Fig. 83(b)) has the special technical feature of having a member 271' such that it is possible that the hollow part 271b' is formed to trapezoidal.

SPECIES XXVII (i.e., Fig. 83(c)) has the special technical feature of having hubs 202A' of the truss structural members 270' which have axes that cross diagonally with the axes of the linking frame members 203' such that a member 272 having on the lower chord member 270B side, a groove part whose face opposite the lower chord member 270B is opened.

SPECIES XXVIII (i.e., Fig. 84) has the special technical feature of having a space truss structural member 280 inclining with the slope of the staircase, a plurality of brackets 206 disposed at each riser height, and treads 207 supported by the space truss structural member 280 via the brackets 206, wherein the space truss structural member 280 comprises two upper chord members 280A and 280A parallel to each

other, linking frame members 283 that link the upper chord members 280A and 280A to each other, one lower chord member 280B positioned below the midpoint of the upper chord members 280A and 280A, and lattice members 284 that link the upper chord members 280A and 280A and the lower chord member 280B to each other.

SPECIES XXIX (i.e., Fig. 87) has the special technical feature of having a space truss structural member 290 inclining with the slope of the staircase, a plurality of brackets 206 disposed at each riser height, and treads 207 supported by the space truss structural member 290 via the brackets 206, wherein the space truss structural member 290 comprises a plate-shaped member 291, one lower chord member 290B positioned below the midpoint of this member 291, and lattice members 284 that link the member 291 and the lower chord member 290B to each other, wherein the member 291 is an extruded member made of an aluminum alloy, and has hollow parts 291a and 291b on the right and left, and a plate part 291b that links these hollow parts 291a and 291a, and on the hollow parts 291a, connection pieces 291c projecting toward the lower chord member 290B are formed.

A telephone call to request an oral election to the above Election of Species Requirement as not made due to the complexity of the election.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Friday, 10:30 am to 7:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (571)-272-6842. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**GAS**  
Gay Ann Spahn, Patent Examiner  
March 24, 2007



Cari D. Friedman  
Supervisory Patent Examiner  
Group 3600